To: Lorna Badman  
NSF International  
Subject: Supplemental Material for Negative Ballot 4i15r1  
May 20, 2008

**Background:** I am in agreement with the request for exemption of the choke fingers and concealed choke finger. This is based on personally utilizing this type design. However, I believe there is a need for more clarification in the exemption in order to assure any future designs meet reasonable cleanability requirements based the ash these units can generate.

**Purpose:** Recommend additional wording to the proposed exemption and supply the Joint Committee with additional information to justify the addition.

**Content:**

Choke Finger Sterilization  
As stated in the material supplied to the Joint Committee, this area is sterilized due to the high temperatures. In fact, based on my findings, Amana may have understated how hot it actually gets. The attached chart documents the actual temperature (F) behind these choke fingers while one of these type units is idling at an oven setting of 525° and during a cook cycle of about 60 seconds using water put in at room temperature.
Note that although temperatures will be driven by what the cavity temperature setting is, the purpose for these ovens is to cook quickly so set points will generally be on the high side.
Oven Ash
Because open product is normally put into these ovens, the cavity is subject to food debris. This debris quickly turns to ash because of the extremely high temperatures and the use of the microwave. This ash, when not cleaned out, blows about within the cavity. Some gets behind the choke fingers. These pictures give examples of what can happen when this ash is blown about the cavity.

This ash, because it is loose, can be blown out from behind the fingers or, as currently designed, cleaned out using paper towels, non abrasive scrub pads or food service wipes. The choke fingers are ¾” to 1” long depending on the manufacturer and the distance between the back of the choke fingers and the assembly the fingers are attached to is about ½”.
The following pictures are from the same unit pictured above after cleaning for 5-10 minutes with plain water and the pictured cleaning materials.

Because of the need to clean behind these choke fingers, it is important that the design behind these choke fingers meet certain design criteria. I am recommending the following additional text regarding the exemption:

NOTE-Choke fingers and the areas concealed by the choke fingers on microwave/convection oven doors shall be exempt from 5.1.5. The area concealed by the choke fingers shall meet the special requirements contained in 5.4.1.

5.4.1 Permanent joints and seams in a food zone or splash zone shall be sealed and smooth. This requirement shall not apply to:

- oven interiors; or
- tight-fitting seams formed by assembling working surfaces of fry top ranges and griddles; or
- fat/oil filter screens; or
- areas concealed by choke fingers on microwave/convection oven doors providing the choke fingers are securely fastened around the entire concealed parameter with closed seams.

Thank you,
Jim Brady
Wawa Operations Engineer